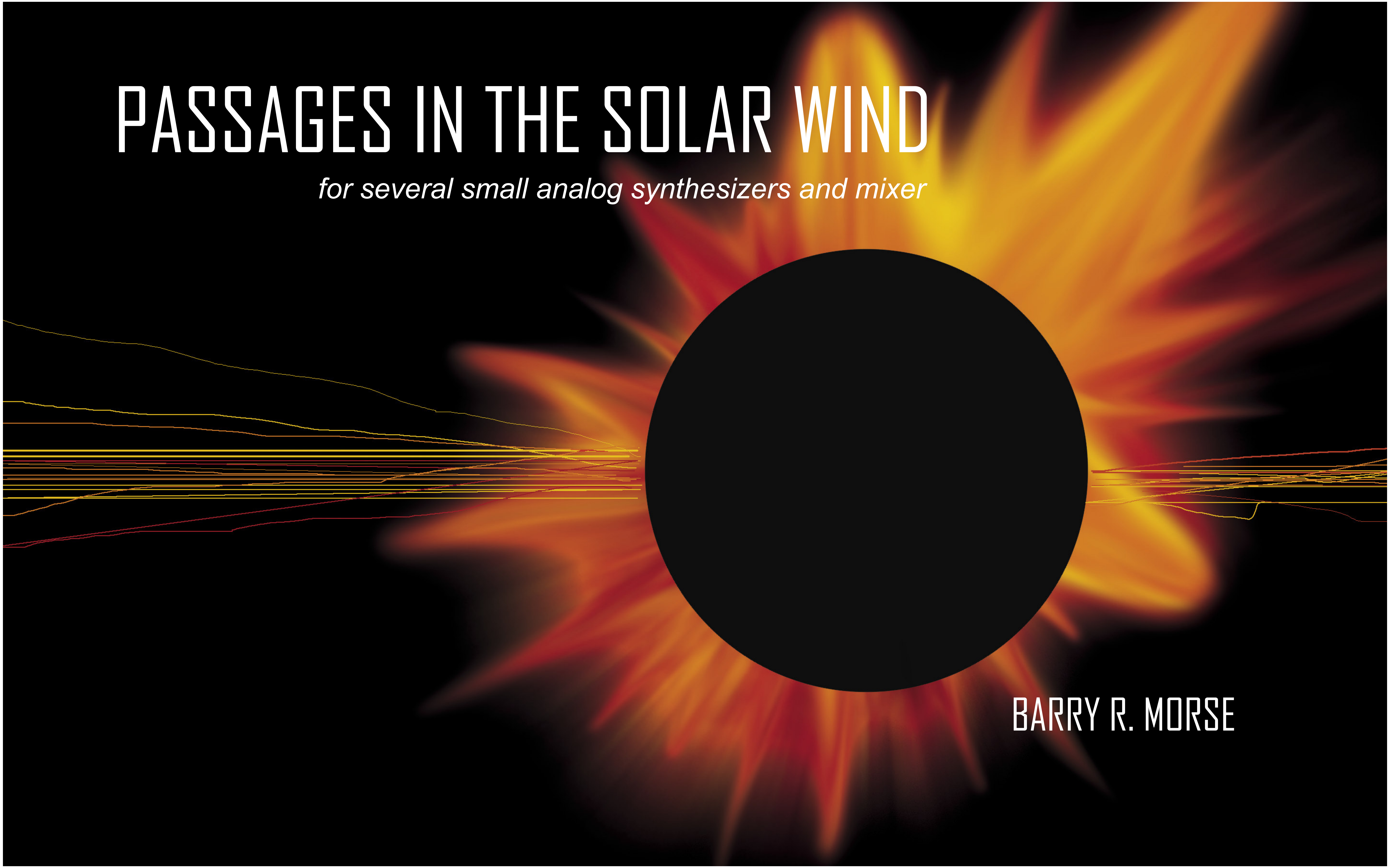
PASSAGES IN THE SOLAR WIND

for several small analog synthesizers and mixer



BARRY R. MORSE

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Passages in the Solar Wind is composed for five specific instruments, all of them small, analog synthesizers commercially available at this time. These are named and manufactures are listed at the bottom of the next page. In addition, there is a part for "mixer". The mixer player will need to use a stopwatch. Passages in the Solar Wind will therefore require six (6) performers.

The instrument parts

1. Relevant switches and knobs are illustrated on the following pages. Some switches and knobs are not highlighted or illustrated: these do not come into play in this piece and therefore should not be used.

2. Each of the five lettered sections of the piece (A - E) shows the five instruments and mixer listed on the left of the page. Top to bottom: "THING" (Thingamagoop 2), "BB" (Bit Blob Jr.), "NEB" (Nebulophone), "PP" (Pico Paso), "MONO" (Monotron), "MIXER" (any mixer with at least five (5) input channels). "CH:" refers to which input channel on the mixer that instrument is to use (1 - 5).

3. For each section (A - E) players follow the instructions for their assigned instrument. Instructions are found in boxes at the beginning of each line and to the right in ovals. The instructions in boxes are graphic and show the player which switches and knobs to set the unit to at the beginning of each section (A - E). Some written instruction is given to clarify how far to turn a knob or what effect is expected. Players should be familiar with their assigned device before any performance; however, some experimentation in performance is expected as producing the desired musical effect is sometimes tricky with these instruments. Written instructions in the oval describe how to interact with the unit to produce melodies, pitch bend and new sounds. Some of these sounds require the performer to physically move the unit by tilting it, turning it or picking it up and maneuvering it in the light. Some require the performer to clip contact leads to different points on the unit. Each instruemnt has its own unique characteristics and players should be as faniliar with their device as possible before any performance.

4. Above each instruction box is a short phrase in italics describing the overall effect wanted for that musical section (A - E), either *"Sustain"* or *"Rapid, random, chaotic".* Players should strive for this general effect while adjusting their devices.

5. Players continue to interact with their instruments in the stated manner throughout each section regardless of what the mixer player is doing.

The mixer part

1. The mixer player is the leader or "conductor" who monitors the timings, indicates to the other players the beginnings of each section (A - E), and brings players in and out of the texture with appropriate volume levels by the use of the channel volume controls (sliders or knobs depending upon the mixer model.)

2. Each of the five (5) lettered sections (A - E) is subdived into five (5) subsections of specific lengths marked by verticle dotted "bar lines". At the beginning of each subsection is a starting time in minutes and seconds (1:10") as measured from the very beginning of the piece. This is a running tally of time. Underneath is a number in parenthesis which is the actual duration in seconds of that subsection.

3. At the start of the performance the mixer player starts the stopwatch and while monitoring the running time moves the faders/sliders/channel input knobs to bring in/out each player's part at the indicated time. Horizontal bars (solid, broken or dotted) indicate the audible output of each channel: no bars indicate output level of "0". Some channels overlap, some stop as another channel begins, and sometimes all channels are simultaneous or all are silent.

4. The mixer player also indicates to all players the beginning of each lettered section (A - E) by some kind of gesture such as a hand wave or nod. This tells the players to change to a new instrument setting as indicated in the boxes at the beginning of each section.

5. Volume levels are largely at the descretion of the mixer player within the following general guidelines: **Entrances/exits:** All channels should enter and exit as fade ins/outs (exception: at D all channels enter/exit simultaneously and as suddenly as possible; **Dynamics:** A should build from *niente* (nothing) to *mp*; B should build swells from *mp* to *f*; C should be moderately soft throughout with fade in/out swells; D should be sudden exlosions of *ff* noise alternating with absolute silence; E begins as D left off-very loud but should then rapidly fade out to *niente* at the end. The final white noise could actually be held longer than indicated with perhaps a *fermata* over the last 1 second subsection to allow a long white noise fade out to infinity. Note: mixer player should check volume levels before performance to avoid damaging equipment.

Other notes:

1. All instruments should be turned ON and already operating before the piece begins. They will naturally be inaudible until their channels are brought up.

2. Instruments should be arranged in the sound field to provide maximum differentiation but care should be taken to provide the fullest possible sound for each instrument as well. (Some instruments may sound better panned to the Center rather than far R or far L for example. Mixer player should experiment.)

3. Players should always strive for *musical* interpretations of the instructions and to interact with the instruments as *musically* as possible.

Compositional Notes:

Passages in the Solar Wind is a “sound mass” piece relying on contrasting blocks of “noise” or “events” rather than traditional melodic/harmonic/rythmic “themes”. There is also no “development”. Alternating sections of *“Sustain”* events and *“Rapid, random, chaos”* events creates a kind of rondo form. What melody there is is improvised.

The sounds

The small analog instruments used in the piece have a wide variety of abilities: some of the instruments such as the Pico Paso are quite limited, others such as the Thingamagoop 2 have such a range of possibilities that much of the instrument’s sounds were not even considered for this work. Although the Bit Blob Jr. has a wide variety of random chaotic sounds, its ability to produce calm, sustained tones seems, at least as of this moment, appears to be limited. This is why it is *tacet* at C. As further experimentaion goes on, perhaps more possiblities will be discovered in these instruments.

It was desired that like sounds/effects should be found in all the instruments so that similar sounds could be combined into a more unified texture. To that end experiemnts were conducted to categorize types of sounds for each instrument. For example, it was found that there are at least five (5) different ways to obtain “sustain” sounds on the Thingamagoop 2, each having its own “color”. These were written down in a notebook complete with sketches of which knobs/switches to throw, how far to turn them and other ways to alter the sound such as manipulating the photocell. No doubt there are others. These settings were tested over time to check their consistency. Stable sounds were combined with like stable sounds inother instruments into blocks of “sustain” or “chaos”. Each recurrence should sound different, however, since there are different “sustain” sounds and “chaos” sounds on most of the instruments.

Performer interaction

One aspect of interactive music utilized in this piece is the idea that players’ performances can be influenced by or processed by another element, procedure or performer outside the players’ control. In this case the players play along following their instructions and interacting with their devices while the mixer player creates the texture, dynamics, and form largely independently of the players.

Structure

Passages in the Solar Wind uses a kind of form where the proportions of the whole are reflected in the proportions of each section. For example, there are five sections of the piece in the prortions of 1, 2, 3, 5 and 7. These are arranged where A is 3, B is 2, C is 7, D is 5 and E is 1. C is therefore the longest section and E is the shortest. Each section of the piece is also subdivided into 5 subsections in the proprtions (in order) 3, 2, 7, 5 and 1, the same as the larger whole (each subsection of C is further subdivided into even spans of 7 seconds, which does not correspond to these proprtions as the shortest event at this level would be impossible to play with a hand controlled mixer). Starting with the shortest event in the shortest section (E) that could be played with the mixer, a 1” (second) fade out, the other subsections’ dimensions were extrapolated according to the proprtions 3, 2, 7, 5, 1 resulting in section E, the shortest, as having subdivisions of 3”, 2”, 7”, 5” and 1” a total of 18” (seconds).

With the shortest section being determined as 18” long and extrapolating to the proprtions of the larger form (3, 2, 7, 5, 1), it was calculated that A would be 54” long, B would be 36” long, C would be 126” long, D would be 90” long and E is 18” long. Thus the entire piece lasts 5’ 24” (5 minutes, 24 seconds). The proprtions of each subdivision in seconds is indicated in the score in parenthesis under the running time.

There is no conscious significance to the numbers 1, 2, 3, 5, and 7 or to there being five sections (A - E) other than the limits of practicality: more sections either lengthened the overall form (perhaps exceding the tolerance of most audiences with this kind of music), or resulting in proprtions too small to be distinctly heard as different. Five sections in these proprtions, after much trial and error, seemed a workable compromise.

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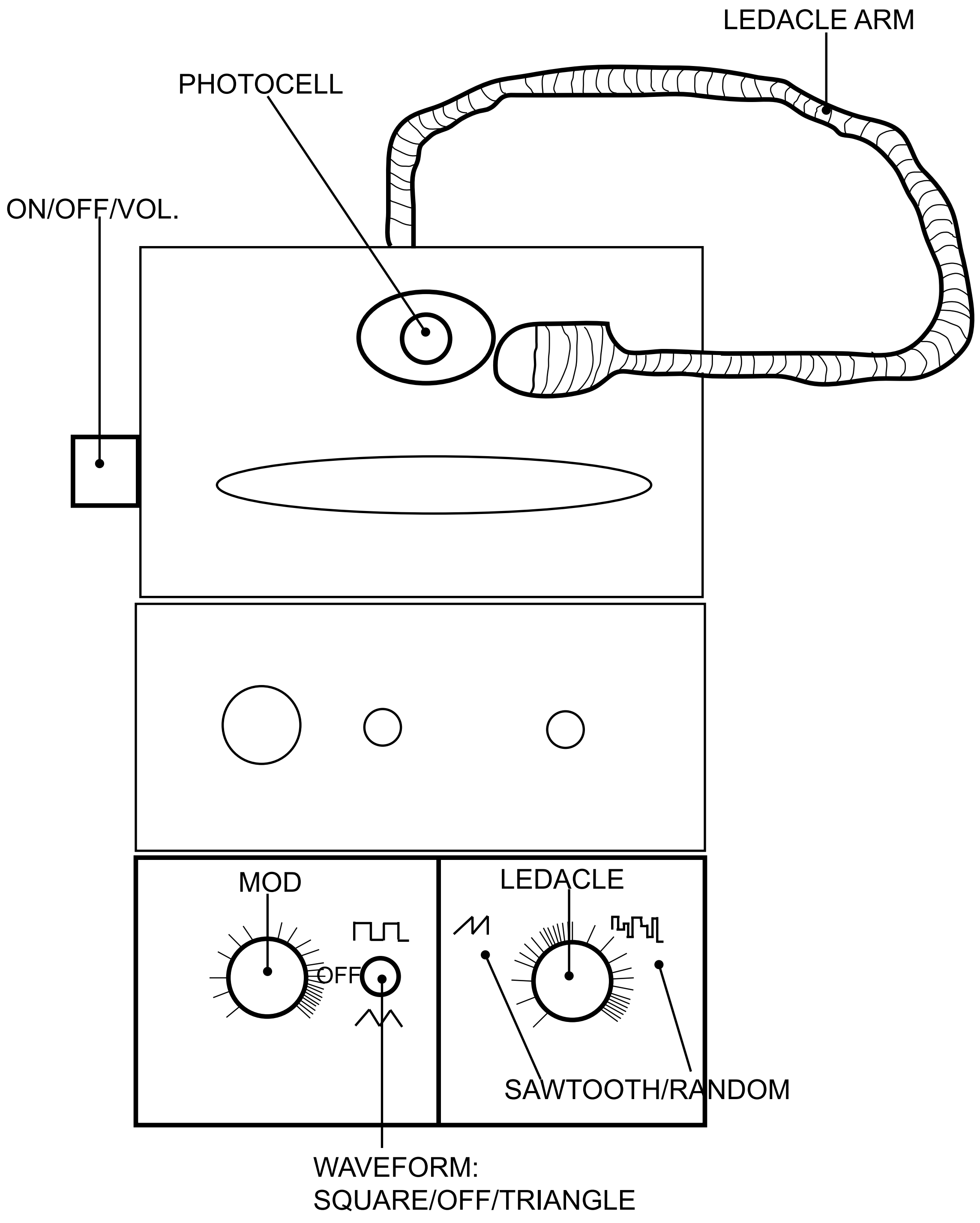
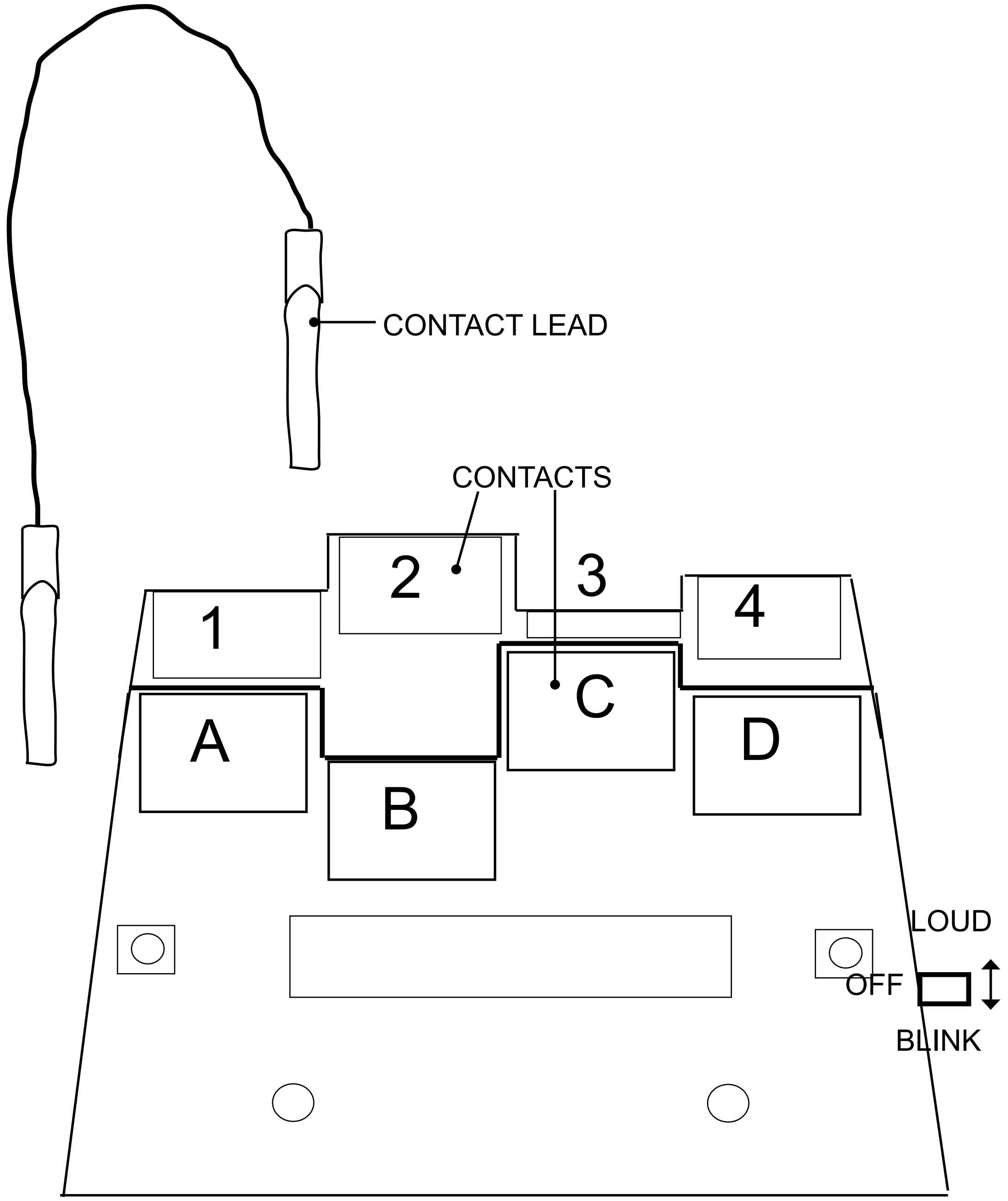
January 29, 2011 Urbana, Illinois

THINGAMAGOOP 2



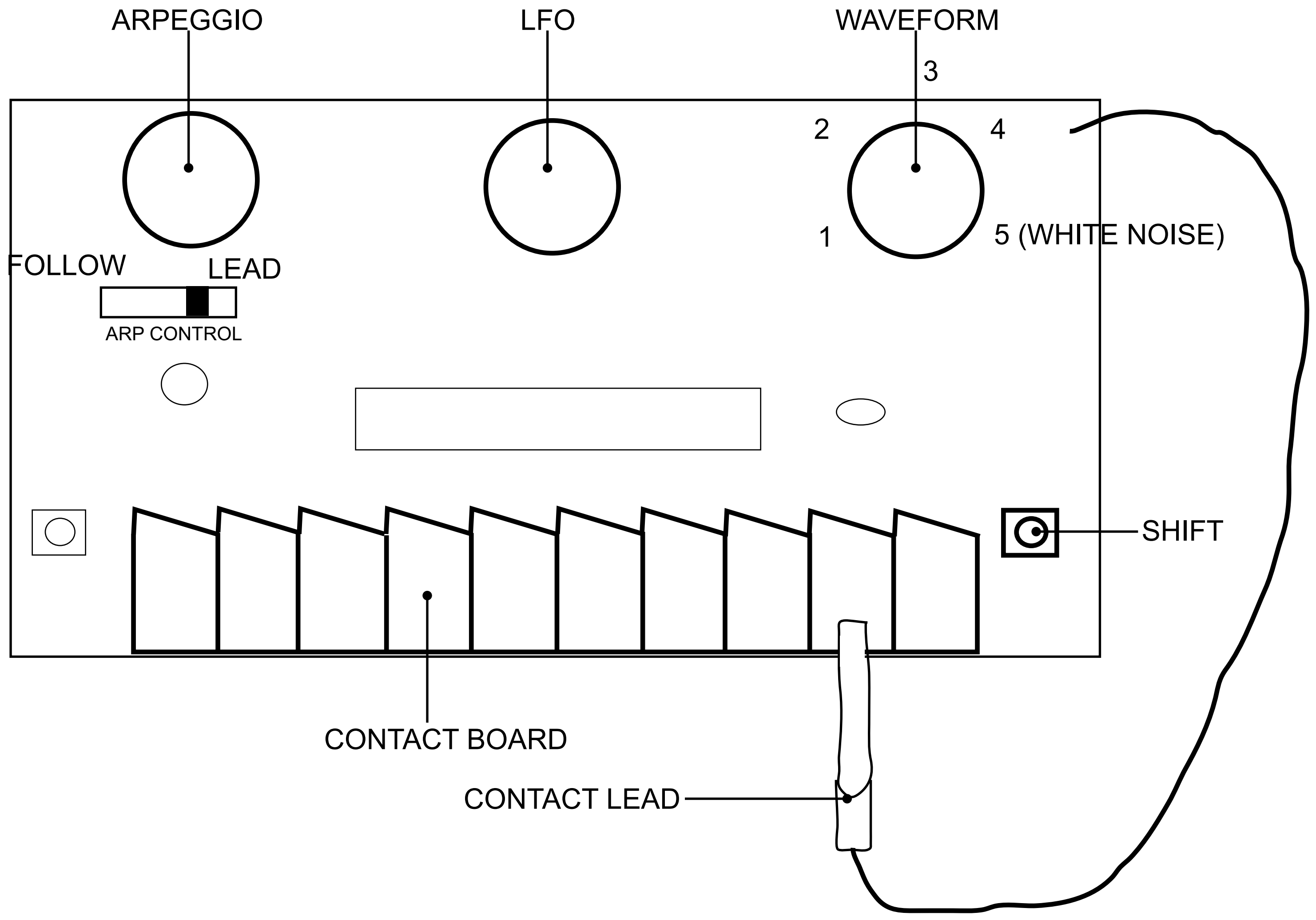
BIT BLOB JR.



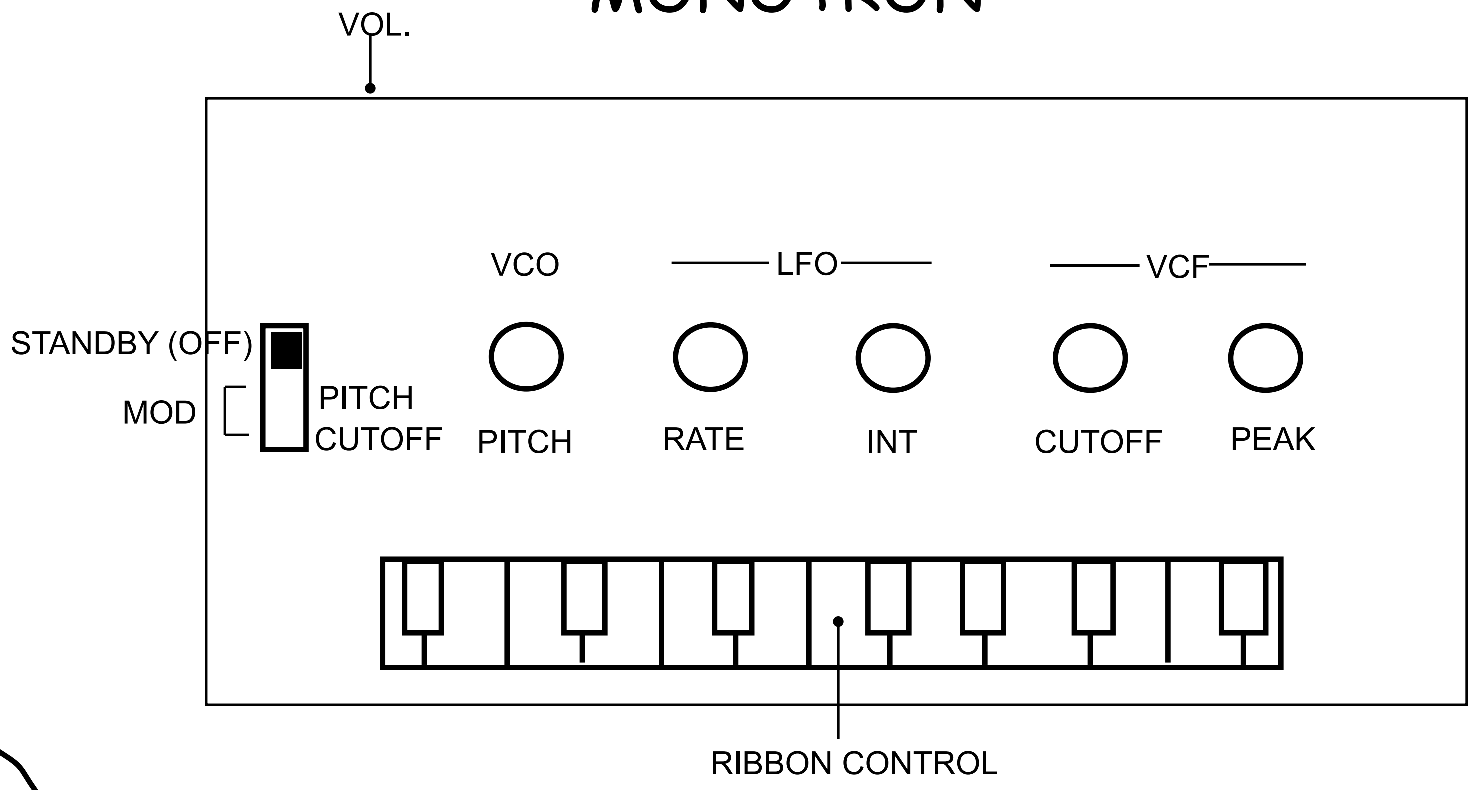
Only relevant features of each device are indicated

THINGAMAGOOP 2, BIT BLOB JR., NEBULOPHONE, and PICO PASO are products of Bleep Labs; MONOTRON is manufactured by KORG

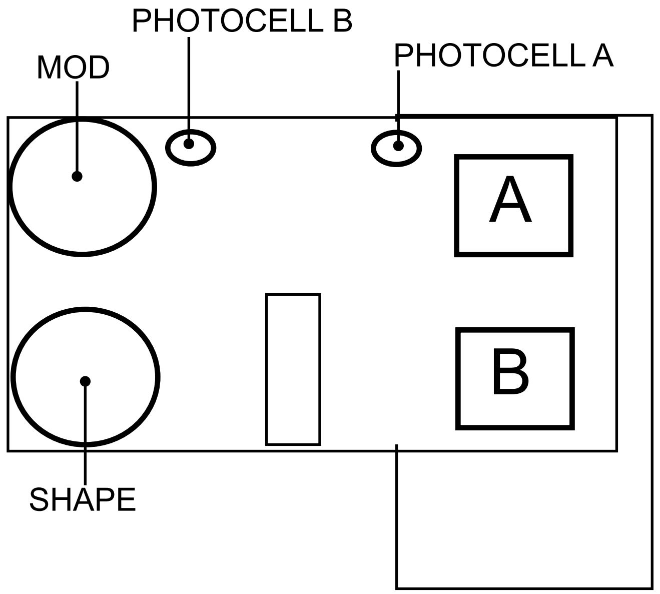
NEBULOPHONE

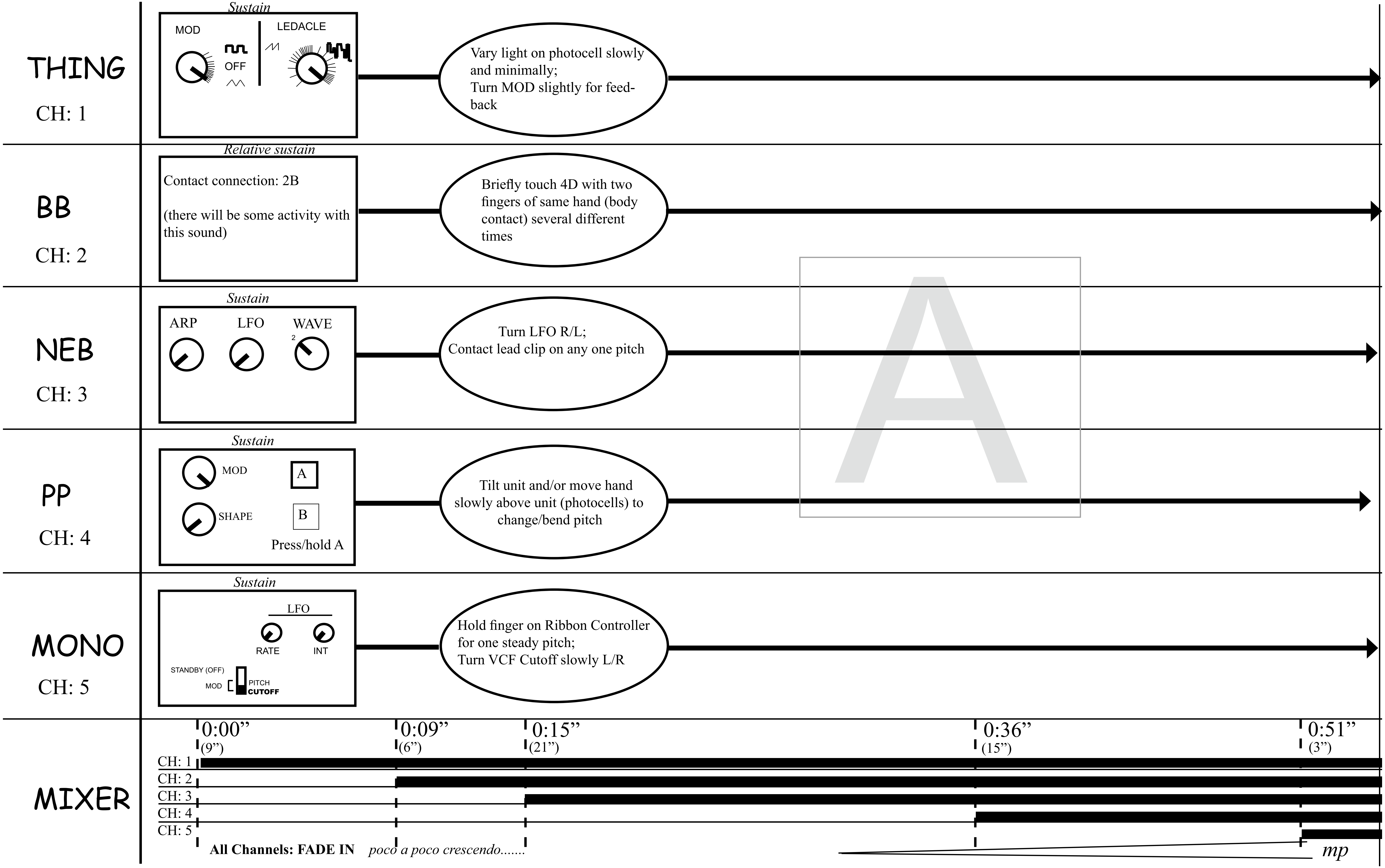


MONOTRON



PICO PASO





THING CH: 1 — Vary light on photocell slowly and minimally; Turn MOD slightly for feed-back

BB CH: 2 — Contact connection: 2B

(there will be some activity with this sound)

Briefly touch 4D with two fingers of same hand (body contact) several different times

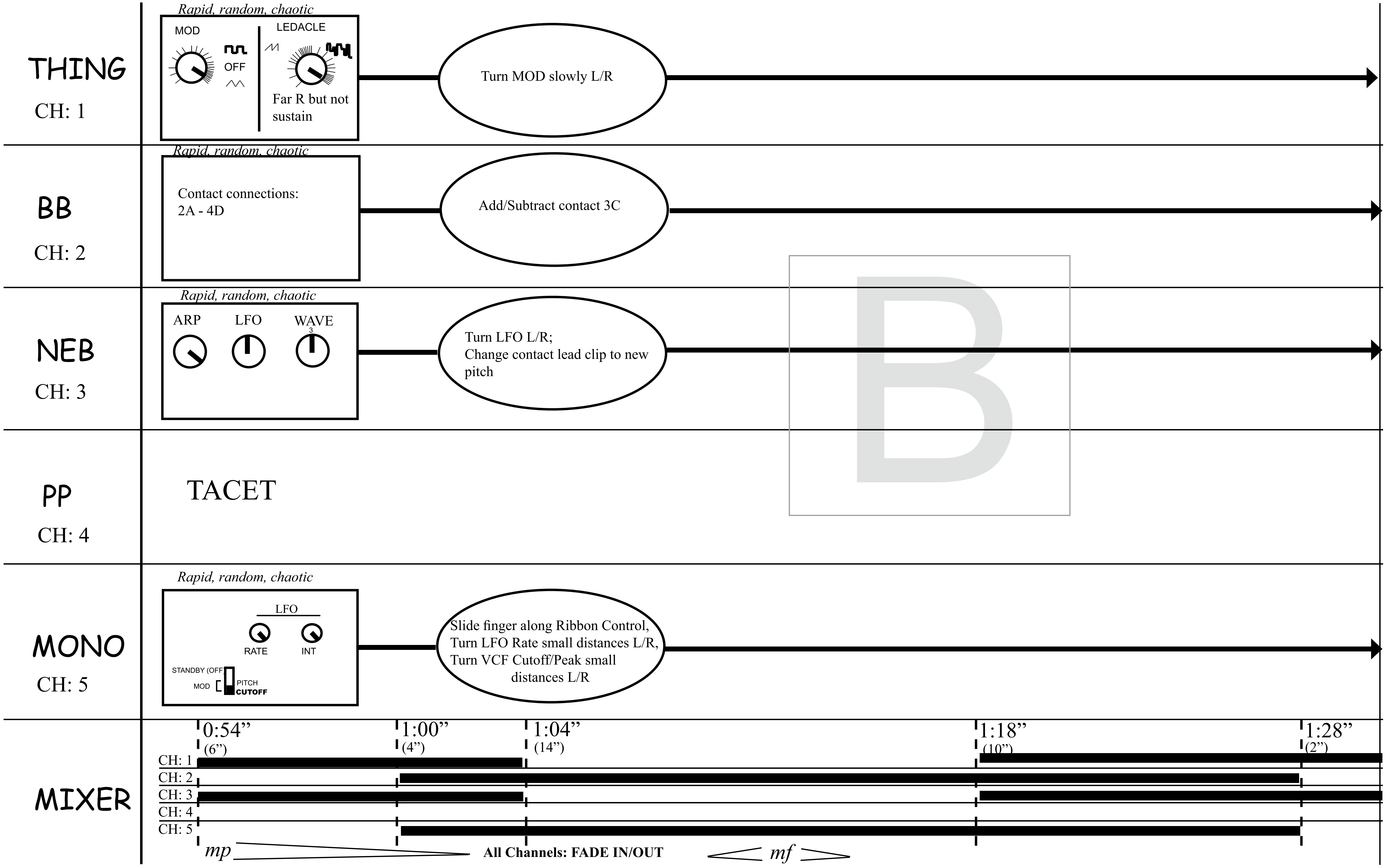
NEB CH: 3 — Turn LFO R/L; Contact lead clip on any one pitch

PP CH: 4 — Press/hold A

Tilt unit and/or move hand slowly above unit (photocells) to change/bend pitch

MONO CH: 5 — Hold finger on Ribbon Controller for one steady pitch; Turn VCF Cutoff slowly L/R

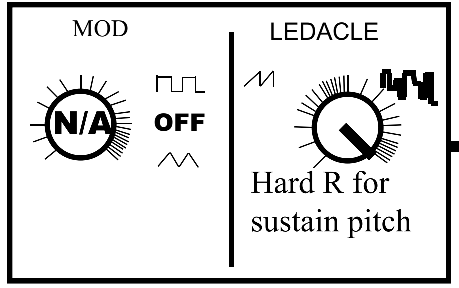
MIXER — **All Channels: FADE IN** *poco a poco crescendo.......*


THING
CH: 1
Rapid, random, chaotic
MOD
OFF
LEDACLE
Far R but not sustain
Turn MOD slowly L/R
BB
CH: 2
Rapid, random, chaotic
Contact connections:
2A - 4D
Add/Subtract contact 3C
B
NEB
CH: 3
Rapid, random, chaotic
ARP
LFO
WAVE
3
Turn LFO L/R;
Change contact lead clip to new pitch
PP
CH: 4
TACET
MONO
CH: 5
Rapid, random, chaotic
LFO
RATE
INT
STANDBY (OFF
MOD
PITCH
CUTOFF
Slide finger along Ribbon Control,
Turn LFO Rate small distances L/R,
Turn VCF Cutoff/Peak small distances L/R
MIXER
0:54”
(6”)
1:00”
(4”)
1:04”
(14”)
1:18”
(10”)
1:28”
(2”)
CH: 1
CH: 2
CH: 3
CH: 4
CH: 5
mp
All Channels: FADE IN/OUT
mf

THING

CH: 1

Sustain



Solo:
Play a tune no one has ever heard before: vary light on photocell by tilting unit, moving Ledacle Arm

BB

CH: 2

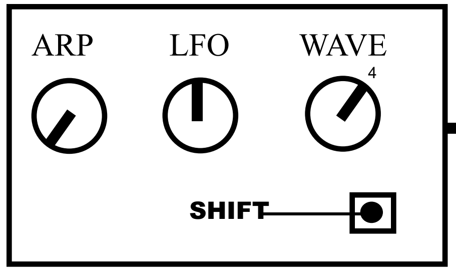
TACET

C

NEB

CH: 3

Sustain

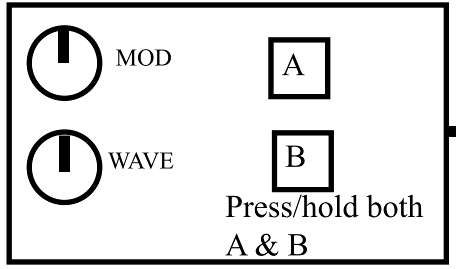


Solo:
Unclip contact lead and use to play a tune no one has ever heard before;use Shift button to change pitch range if desired

PP

CH: 4

Sustain

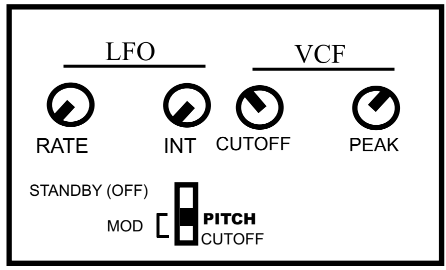


Tilt unit and/or move hand slowly above unit (photocells) to change/ bend pitch

MONO

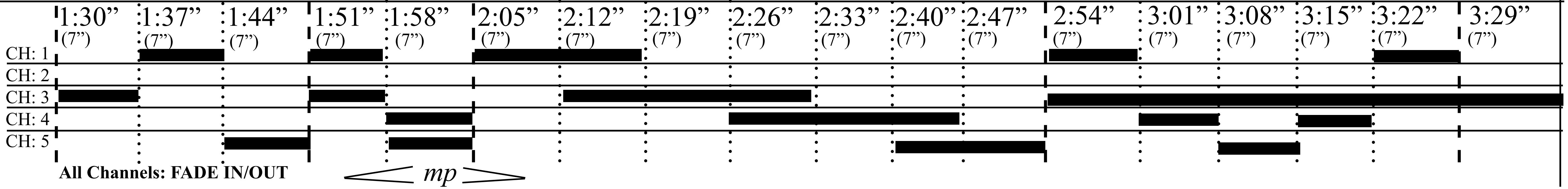
CH: 5

Sustain



Solo:
Play a tune no one has ever heard before by sliding/touching finger along Ribbon Control; roll finger for pitch bend, wriggle for vibrato; Turn VCF as desired

MIXER



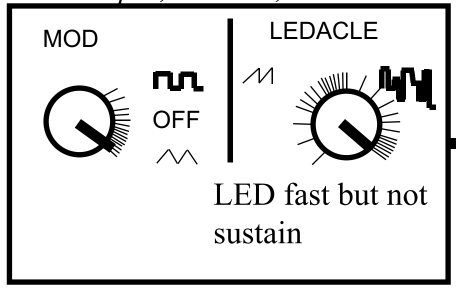
All Channels: FADE IN/OUT

< *mp* >

D

THING
CH: 1

Rapid, random, chaotic



LED fast but not sustain

Turn MOD to R for squelch;
Move Ledacle Arm for wild and aggressive pitch bend

BB
CH: 2

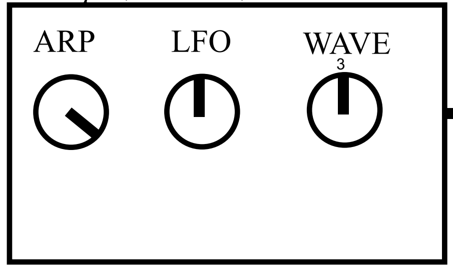
Rapid, random, chaotic

Contact connection:
Use all 3 contact lead clips

Attach contact leads in different combinations for constantly changing patterns

NEB
CH: 3

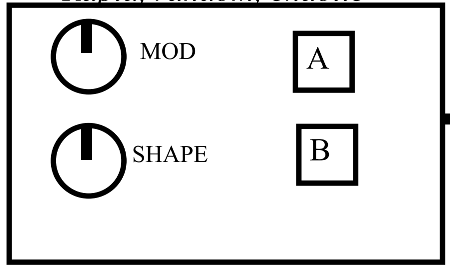
Rapid, random, chaotic



Turn LFO L/R;
Change contact lead clip to new pitch

PP
CH: 4

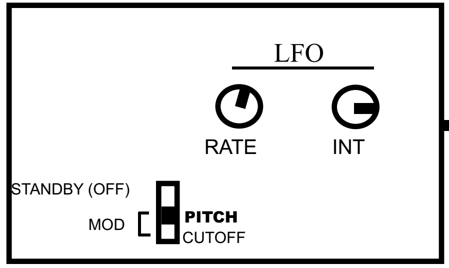
Rapid, random, chaotic



Press/hold A & B in various combinations while turning MOD and SHAPE L/R; tilt unit/wave hand over photocells for rapid and random changes in pitch

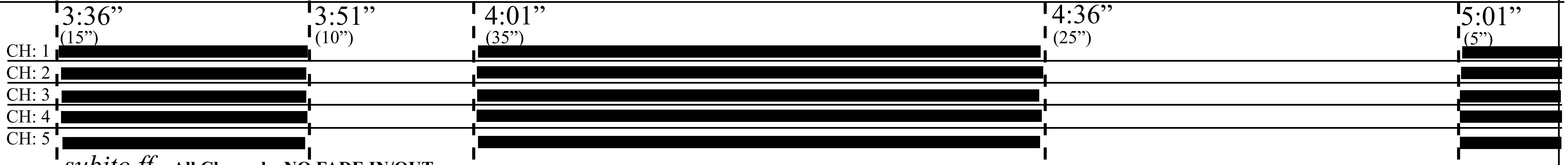
MONO
CH: 5

Rapid, random, chaotic

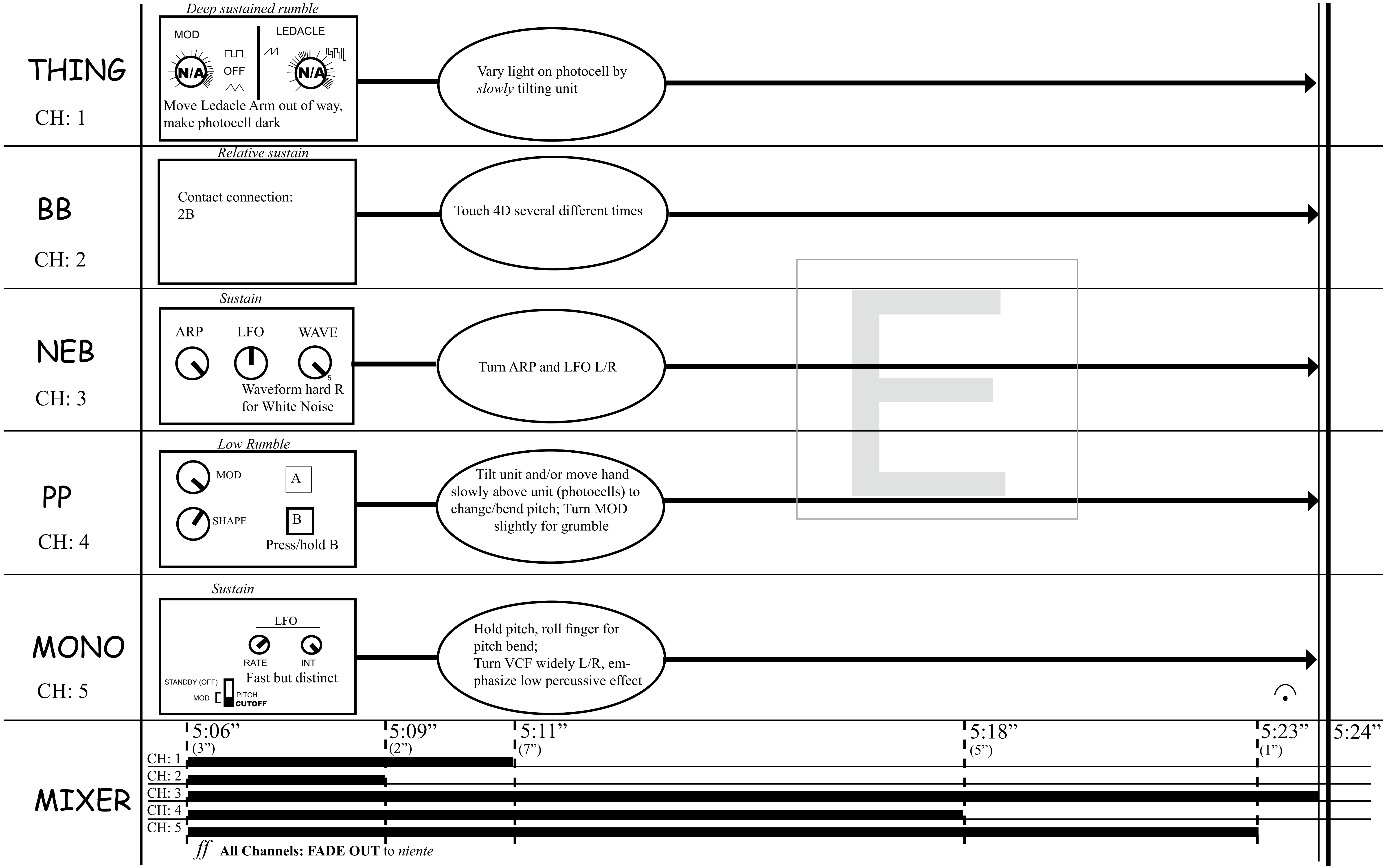


Slide finger along Ribbon Control;
Turn VCF L/R as desired

MIXER



subito ff **All Channels: NO FADE IN/OUT**


THING
CH: 1
Deep sustained rumble
MOD
OFF
LEDACLE
N/A
N/A
Move Ledacle Arm out of way, make photocell dark
Vary light on photocell by *slowly* tilting unit
BB
CH: 2
Relative sustain
Contact connection: 2B
Touch 4D several different times
NEB
CH: 3
Sustain
ARP
LFO
WAVE
5
Waveform hard R for White Noise
Turn ARP and LFO L/R
E
PP
CH: 4
Low Rumble
MOD
SHAPE
A
B
Press/hold B
Tilt unit and/or move hand slowly above unit (photocells) to change/bend pitch; Turn MOD slightly for grumble
MONO
CH: 5
Sustain
LFO
RATE
INT
Fast but distinct
STANDBY (OFF)
MOD
PITCH
CUTOFF
Hold pitch, roll finger for pitch bend;
Turn VCF widely L/R, emphasize low percussive effect
MIXER
5:06” (3”)
5:09” (2”)
5:11” (7”)
5:18” (5”)
5:23” (1”)
5:24”
CH: 1
CH: 2
CH: 3
CH: 4
CH: 5
ff **All Channels: FADE OUT** to *niente*